

What is claimed is:

1. A motor vehicle, comprising:

a passenger compartment;

an engine compartment;

a dash panel separating the passenger compartment from the engine compartment;

a heater module mounted to the dash panel in the passenger compartment, the heater module comprising an inlet, a blower immediately downstream from the inlet, a scroll channel from the blower, a heater core plenum located adjacent the scroll channel, a temperature blend door arranged to pivot into and out of the scroll channel for closing and opening access an air path including the heater core plenum, a manifold, a vent door and a defrost door positionable in the manifold; and

an evaporator module mounted to the dash panel in the engine compartment, the evaporator module comprising a outside air inlet, a recirculation air inlet in communication with the return outlet of the heater module, a recirculation control door for controlling the proportion of air drawn through the recirculation inlet and the outside air inlet, an evaporator downstream from the recirculation control door, an outlet communicating with the inlet to the heater module.

2. A motor vehicle as set forth in claim 1, wherein the heater module further comprises:

a unified gear train and follower mechanism for coordinating control of the vent door and the defrost door; and

a pulse count actuator motor coupled to drive the unified gear train and follower mechanism.

3. A motor vehicle as set forth in claim 2, wherein the pulse count actuator coupled to the unified gear train and follower mechanism is responsive to the motor vehicle being started to reset the vent door and the defrost door to a default position.
4. A motor vehicle as set forth in Claim 3, wherein the heater module further comprises:
- the temperature blend door being actuated by a temperature blend control pulse count actuator;
- and
- the temperature blend door including first and second flaps, which, when the door is positioned to close off the heater core from air flow, cover an inlet to and outlet from the heater core, respectively.
5. A motor vehicle as set forth in Claim 4, wherein the evaporator module further comprises:
- the recirculation door being actuated by a recirculation control pulse count actuator.
6. A motor vehicle as set forth in Claim 1, the heater module further comprising a slot for receiving the heater core.
7. A motor vehicle as set forth in claim 6, the evaporator module further comprising:
- a first drain from the evaporator module for precipitation infiltrating the module and a second drain from the evaporator module for condensation off the evaporator.
8. A motor vehicle as set forth in claim 7, further comprising a low voltage controller for the blower motor.
9. A motor vehicle as set forth in claim 1, the dash panel providing openings on the right side and the left side for the evaporator module and a steering column, with the evaporator module being formed to fit over either the left or the right side of the dash panel over one of the openings.

10. A heating, ventilation and air conditioning system for a vehicle having a passenger compartment, an adjacent engine compartment and a dash panel separating the passenger compartment from the engine compartment, comprising:

an engine compartment module having a base formed for positioning on at least two locations on a dash panel, a outside air inlet, a secondary air inlet for communication with the passenger compartment, an air outlet and defining a air transport conduit connecting the outside air inlet or the secondary air inlet with the air outlet;

a passenger compartment module having a slide in slot for a heater core, an inlet for communication with the air outlet from the engine compartment module, an air manifold, a panel exhaust from the air manifold, a defrost exhaust from the air manifold, a compartment door providing access to the slide in slot, and an air channel from the inlet to the air manifold;

a heater core retained in the slide in slot;

a temperature blend door positioned in the air channel on a pivoting mount allowing movement of the temperature blend door to various positions controlling the proportion of air flow through the air channel diverted through the heater core;

a pulse count actuator coupled to the temperature blend door for positioning the temperature blend door;

a vent door mounted on a pivoting mount and positionable in the air manifold for diverting air flow through the panel exhaust;

a defrost door mounted on a pivoting mount and positionable in the air manifold for diverting air flow through the defrost exhaust; and

- a kinematic movement comprising drive gears for the pivoting mounts for the vent door and the defrost door, and a pulse count actuator coupled to the drive gears for controlling the positioning of the vent door and the defrost door.
11. A heating, ventilation and air conditioning system as set forth in claim 10, further comprising:
- a blower situated in the air channel of the passenger compartment module upstream from the slide in friction slot; and
- a low voltage continuously variable controller for the blower.
12. A heating, ventilation and air conditioning system as set forth in claim 11, further comprising:
- an evaporator mounted in the engine compartment module; and
- first and second drains from the air channel through in the engine compartment module.
13. A heating, ventilation and air conditioning system as set forth in Claim 12, further comprising:
- a pulse count actuator coupled to the temperature blend door for controlling the position thereof.
14. A heating, ventilation and air conditioning system as set forth in Claim 13, further comprising:
- a recirculation door positionable to close or open the outside air inlet; and
- a pulse count actuator coupled to the recirculation door for controlling the position thereof.